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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/815,563	03/23/2001	Shunpei Yamazaki	SEL 248	9704

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EXAMINER

MACCHIAROLO, PETER J

ART UNIT PAPER NUMBER

2879

DATE MAILED: 12/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/815,563

Applicant(s)

YAMAZAKI ET AL.

Examiner

Peter J. Macchiarolo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6, 13-16, 18 and 30-60 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6, 13-16, 18 and 30-60 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application on 11/25/2005. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/25/2005 has been entered. However, pending claims 1-4, 6, 13-16, 18, 30-60 are not allowable as explained below. An action on the RCE follows.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, 6, 13-16, 18, 30-33, 49-55, 59 and 60 are rejected under 35 U.S.C. 103(a) as being unpatentable over previously cited Beesely (USPN 5400047; "Beesely") in view of previously cited Terao et al (USPN 6133581; "Terao").

Regarding claim 1, Beesely shows in figure 4, a light emitting apparatus having at least one light emitting element over an insulator (52), the light emitting element comprising: a first electrode (64) having at least a first edge and a second edge formed over said insulator; at least one wiring (66) formed in contact with the first edge of the first electrode, and wherein the wiring is not part of the first electrode; an insulating film (56) covering at least the first and the

second edges of the first electrode; a second electrode (62) formed over said insulating film; and a luminescent material (58) interposed between said anode and said second electrode, and between said second electrode and said insulating film.

Beesely is silent to the first and second electrodes being anodes and cathodes, respectively, and the wiring being interposed between the insulator and the anode.

However, Beesely discloses the device is driven with AC power, which is known to alternate both the first and second electrodes to anodes and cathodes, respectively.

Furthermore, Terao shows in figures 8c that a light emitting apparatus having a wiring (2b) on the edge of an anode in a configuration similar to Beesely, can also be positioned between the insulator (fig. 8e, #1) and anode (2a), teaches in column 8, lines 18-27 that the positional relationships of the wirings is a matter of design choice. Furthermore, it has been held that a mere rearrangement of parts and a matter of design choice. *In re Japikse*, 86 USPQ 70. One would be motivated to this configuration for a variety of reasons, including material availability, space requirements, and reducing manufacturing time and money as discussed in the Advisory Action filed 11/15/2005.

Therefore, in view of the above discussion, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the light emitting apparatus of Beesely with the wiring configuration of Terao.

Regarding claims 2 and 3, Beesely discloses the wiring is formed of a metal film of aluminum (fig. 7, #74).

Regarding claim 4, Beesely discloses the first electrode is formed of electrically conductive oxide film (ITO).

Regarding claim 6, Beesely shows in figure 12 an electric device (waveform generator) using an apparatus of claim 1.

Regarding claim 30, Beesely shows the wiring is different in material from the anode.

Regarding claim 31, Beesely shows the wiring is made of a material lower in resistance than that of the anode.

Regarding claims 13, 49, and 55, Beesely shows in figure 4, a light emitting apparatus having at least one light emitting element over an insulator (52), the light emitting element comprising: an first electrode (64, discussed above as an anode) having at least a first edge and a second edge formed over said insulator, the anode extending in a first direction wherein each of the first edge and the second edge of the anode extends along the first direction, a first and second wiring (66) formed in contact with the first and second edges of the anode respectively, and extending in the first direction, and the first wiring and the second wiring are not part of the anode; an insulating film (56) covering at least the first and the second edges of the anode; a second electrode (62, discussed above as a cathode) formed over said insulating film; and a luminescent material (58) interposed between said anode and said cathode, and between said

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cathode and said insulating film, and the insulator does not contact with the luminescent material.

Beesely is silent to the first and second electrodes being anodes and cathodes, respectively, and the wiring being interposed between the insulator and the anode.

However, as discussed above, the first and second electrodes will be anodes and cathodes.

Furthermore, as discussed above, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct Beesely's wirings between the anode and insulator in view of Terao's teachings.

Regarding claims 14-16, 18, 32, 33, and 50-54, the limitations therein have been discussed above and will not be repeated here. The reasons for combining and motivation are the same.

Regarding claims 59 and 60, Beesely shows in figure 4 the insulator does not contact with the luminescent material.

Claims 34-37 and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beesely in view of Terao in further view of Kusunoki et al (USPN 6570321; "Kusunoki").

Regarding claim 34, similar limitations herein have been discussed in the rejection of claim 13 and will not be repeated here.

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However, Beesely and Terao are silent to a first driver circuit connected to the anode and a second driver circuit connected to the cathode, and the method of mounting the circuits.

Kusunoki shows, however, that a first and second driver will be needed in a light emitting apparatus of Beesely and Terao, and mounting the drivers by a COG system is a known method of mounting the drivers. One would be motivated to these modifications to allow for proper operation of the device.

Therefore, in view of the above discussion, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the device of Beesely and Terao with a first driver circuit connected to the anode and a second driver circuit connected to the cathode, and mounting the drivers with a COG system to allow for proper operation of the device.

Furthermore, the Examiner notes that the claim limitation "mounting the drivers by a COG system" is drawn to a process of manufacturing which is incidental to the claimed apparatus. Even if arguendo, Beesely, Terao, and Kusunoki did not teach the particular mounting system, it is well established that a claimed apparatus cannot be distinguished over the prior art by a process limitation. Consequently, absent a showing of an unobvious difference between the claimed product and the prior art, the subject product-by-process claim limitation has been considered, but not patentably distinct over Beesely, Terao, and Kusunoki (see MPEP 2113).

Regarding claims 35-37, and 56, the limitations therein have been previously discussed at above.

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Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Beesely in view of Terao in further view of Kusunoki, in further view of Codama et al (USPN 6037712; "Codama").

Regarding claim 38, Beesely, Terao, and Kusunoki are silent to the light emitting apparatus having a plurality of banks arranged to be orthogonal to the anode.

However, Codama shows this configuration reduces manufacturing time and increases reliability of the device.

Therefore, in view of the above discussion, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the device of Beesely, Terao, and Kusunoki with the banks of Codama to reduce manufacturing time and increase the device's reliability.

Claims 39, 40-42, 44-47, 57, and 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beesely in view of Terao in further view of Kusunoki, in further view of Yokoi et al (USPN 5962970; "Yokoi").

Regarding claims 39 and 44, the limitations therein have been discussed at numbered paragraphs 13-16, but Beesely, Terao, and Kusunoki are silent to connecting the first and second stick drivers to an anisotropic electrically conductive material or a metal wire. However, it is noted that the inclusion of an anisotropic electrically conductive material or a metal wire is not shown to solve any problems or yield any unexpected results that are not within the scope of Beesely, Terao, and Kusunoki's display. Accordingly, this inclusion is considered to be an

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obvious matter of design choice. For example, Yokoi discloses that a stick driver can be connected to an electrode with an anisotropic electrically conductive material.

Therefore, in view of the above discussion, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the device of Beesely, Terao, and Kusunoki including connecting first and second stick drivers to the anode and cathode through anisotropic electrically conductive material or by a metal wire to allow for easy manufacturing and proper operation.

Regarding claims 40-42, 45-47, 57, and 58, the limitations therein have been previously discussed above.

Claims 43 and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beesely in view of Terao in further view of Kusunoki, in further view of Yokoi, in further view of Codama.

Regarding claims 43 and 48, Beesely, Terao, Kusunoki, and Yokoi are silent to the light emitting apparatus having a plurality of banks arranged to be orthogonal to the anode.

However, Codama shows this configuration reduces manufacturing time and increases reliability of the device.

Therefore, in view of the above discussion, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the device of Beesely, Terao, and Kusunoki with the banks of Codama to reduce manufacturing time and increase the device's reliability.

Response to Arguments

Applicant's arguments filed 11/25/2005 have been fully considered but they are not persuasive.

The arguments currently presented are the same as the arguments filed 10/21/2005 after final rejection. Response to the current arguments are therefore the same as the ones presented in the advisory action filed 11/15/2005.

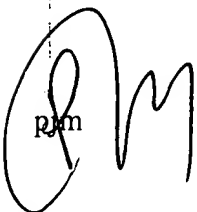
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter J Macchiarolo whose telephone number is (571) 272-2375.


The examiner can normally be reached on 8:30 - 5:00, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar Patel can be reached on (571) 272-2475. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



pjm


JOSEPH WILLIAMS
PRIMARY EXAMINER